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# SOME OBSERVATIONS ON MENTAL DEFECTIVENESS AND MENTAL RE- TARDATION AMONG CHILDREN

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## SOME OBSERVATIONS ON MENTAL DEFECTIVENESS AND MENTAL RETARDATION AMONG CHILDREN.<sup>1</sup>

By WALTER L. TREADWAY, Passed Assistant Surgeon, United States Public Health Service.

The popularity and simplicity of certain formal psychological tests has led some to rely implicitly on them for diagnosing the condition known as feeble-mindedness. By such a method an artificial standard has been fixed whereby an individual grading below a certain point has been classified as feeble-minded and above such a point as normal. In fact, however, at least among children, no distinct demarcation exists between the so-called higher types of feeble-mindedness on the one hand and normal mentality on the other. Nature's method is one of gradation; shading, as it were, all her activities from one complexion to another. Moreover, the routine application of the formal psychological tests by untrained persons may readily lead to serious mistakes by classifying as feeble-minded, children whose mental development has merely been retarded.

Binet<sup>2</sup> and Simon, in discussing the psychology of the feeble-minded child, point out that he does not resemble a normal child whose mental development is simply retarded. In the case of the former, they say, the retardation has not been uniform, showing as an end result a greater development of intelligence in some respects than in others. Binet and Simon, therefore, conclude that the mental equipment of the feeble-minded lacks equilibrium or proper balance. They also state that feeble-minded children, while they resemble, by reason of retarded intellect, much younger normal children, show defects of reasoning, understanding, and imagination which do not appear in the latter. These authors are of the opinion that the mental powers of the feeble-minded child show individual peculiarities of a pathological kind.

Howe claimed that mental defectives resemble the insane in that they both show intellectual or moral degradation or a combination of the two. Hoffbauer thought this was true in the case of the higher grade mental defectives, because he considered that their powers of judgment were clouded with evil and because they had passionate attacks of anger. It appears that a number of classifi-

<sup>1</sup> Reprint from the Public Health Reports, vol. 34, No. 15, Apr. 11, 1919, pp. 732-736.

<sup>2</sup> Binet and Simon, "Mentally Defective Children." Authorized translation by W. B. Drummond. Published by Edw. Arnold, 1911.

cations have been devised which confound insanity and mental deficiency. This confusion is partly explained by the fact that certain peculiarities of make-up or affective reactions which put the individuals out of harmony with their environment show a more or less low grade of intelligence when an intelligence scale or other psychological test for grading of intelligence is applied. The relationship, therefore, between the higher grade feeble-minded and the insane is closer than it would first appear to those unacquainted with psychiatric problems.

There has long been an insistent demand on the part of psychiatrists that the facts be faced and that the existence of a borderland group which bridges the gap between a condition of feeble-mindedness and normality be recognized. Among this borderland group are certain individuals whose constitutional make-up is so badly adjusted to the demands of society that it brings them within the purview of the criminal code or leads to conflict with certain conventional standards. Among medical men, and especially those experienced in the care, treatment, and management of the insane, it has long been recognized that a number of these borderland cases become insane in after life or are classed as so-called criminals whose paths may eventually lead to hospitals for the insane. This "psychopathic twilight zone" between feeble-mindedness and insanity on the one hand and normality on the other is, after all, spanned by a bridge of few arches. The understanding of them constitutes one of the many problems in mental hygiene and is a problem best to be solved by one having a knowledge of clinical psychiatry. Psychiatric knowledge is, therefore, to be regarded as an essential requisite for one who would diagnose the higher types of feeble-mindedness. But this is not all. The work demands, in addition, sound medical knowledge.

A number of years' experience in the mental examination of American school children has revealed the fact that inanition and auditory defects retard proper mental development. Disorders of the nose and throat that induce inflammatory diseases of the middle ear also act indirectly as a cause of mental retardation. Those who deal with educational problems should therefore appreciate the fact that reliance can not be placed upon formal, psychological tests for diagnosing the higher grade cases. In this connection it may be stated that the Binet-Simon scale for grading intelligence (or its many modifications which have so many points in common) are fairly reliable for the purpose intended—the grading of intelligence. Moreover, although many things besides mental defectiveness modify the results of these tests, this is not a fault of the tests.

The application of these tests to a large group of American school children living under varying social and economic conditions has

shown that many normal children—normal from the standpoint of school work—grade either one year in advance or one year behind their chronological age. Thus, it was found that the 6, 7, 8, and 9 year old children graded either regular, one year advanced, or one year retarded. In the case of children 10, 11, and 12 years old, chronologically, large numbers graded either regular, one year advanced, or one or two years retarded. The 14, 15, and 16 year old children graded largely within the limits of 11 and 15 years, mentally, and those of 17 to 20 years of age graded from 12 to adult.

The grading of children by these tests gives one, for educational purposes, and in a comparatively short time, an insight into their mental capacity. The results, moreover, are usually correct to within one year. To obtain similar results by observation methods usually requires a much longer period of time. It may therefore be concluded that the Binet-Simon scale is a desirable adjunct in the rapid classification of the intelligence of a group of individuals for pedagogical reasons and that it fulfills the need for which it was intended.

The results of an intensive study conducted by the United States Public Health Service of 2,185 rural school children indicate that the limits of normal intelligence, as shown by grading with the Binet-Simon scale, become wider as the higher chronological ages are reached. With the approach of adolescence the mental equipment becomes more complex and is less accurately measured by an arbitrary scale than it is in early childhood. Thus it is found that children of 6 years who are 4, mentally, of 7 who are 5, of 8 who 5 or 6, of 9 who are 6 or 7, of 10 who are 6 or 7, of 11 who are 7 or 8, of 12 or 13 who are 8 or 9, of 14 or 15 who are 9 or 10, of 16 who are 10, of 17 to 20 who are 11, are classified as retarded children and are considered as a borderland feeble-minded group. Below this group are the definitely feeble-minded whose mental development will never be greater than that of a child.

In this connection it is important to consider the age of the individual graded and to bear in mind the rate of mental progress which attends the different periods of life. Unfortunately there is at present no accurate means of measuring the rate of mental progress. It is well known, however, that the rate is rapid for the first few years of life, but becomes slower as maturity is approached. The difference in the mental development of a normal 2-year-old child and one 3 years old is readily recognized. This difference becomes difficult to note between the ages of 6 and 7, and between 11 and 12 years of age the recognition of mental differences by ordinary observation is quite impossible. Mental development during any one-year period does not represent accurately a unit of mental growth, because the older the child the less is the rate of mental development and the less noticeable is the retardation in any one-year age period.

Moreover, retardation in very young children presents two possibilities. In the first place, when conditions are favorable owing to the greater number of years intervening before maturity, these children eventually may attain normal mental development. On the other hand, when conditions are unfavorable, retardation may accumulate and become increasingly evident with advancing age. In consequence, the ultimate mental development of young children thus classified can not be foretold.

The problem is not so complex, however, in the case of adults or individuals who have reached a chronological age at which the rate of mental development is slower. Retardation below a certain point can not be overcome in the short time intervening before maturity at the slower rate of development, and the mental status in these cases may be determined with a fair degree of certainty.

In attempting to decide whether or not a given case of retarded mental development is feeble-minded, inquiry is usually made as to possible hereditary influences. Heredity, no doubt, plays a part as a cause of mental retardation, but exactly how this operates is not at present clearly understood. In some of these individuals it may be found that one or more of the antecedents are insane, feeble-minded, epileptic, nervous, criminal, addicted to alcohol or drugs, or that they manifest other less marked, antisocial tendencies. On the other hand, a number of the antecedents may be found to be intellectually brilliant and to be playing an important part in shaping the progressive activities of a community. Moreover, it is not uncommon to find that one or more brothers or sisters of these retarded cases are either mentally retarded or very brilliant; in the latter case bordering on genius. Unfavorable heredity, therefore, is not sufficiently understood to draw conclusions as to whether or not these retarded cases are definitely feeble-minded. It is a factor, however, and the person with such heredity should be regarded as possessing the so-called "neuropathic taint."

A number of those with this so-called neuropathic predisposition have been agitators of reforms that were considered irregular or far in advance of their time. Many of them appear to follow the by-paths of thought and seem to have a genius for looking at things in a different manner from that in which those untainted by such heredity look. In consequence they have left behind them gems in literature, music, and art, and have led and advocated social reforms that changed the moral conduct of man, and exercised good influences over his activities and thoughts. However, before conclusions can be reached in regard to the eventual mental outcome of the borderland cases, study and observation are necessary. It is already known that, among individuals who are classed as borderland cases, there

are some in whom faulty habits of training are responsible for mental retardation. Environment also plays a part in its production, but how much and in what way it operates are not well understood. One need but turn to the history of democracy to find it replete with great men and women who have come from what is regarded as untoward environments. Limited educational opportunities also play a part in the failure of certain individuals to score a high mark when graded by formal psychological tests. These are the cases that have been classed as "dull but not tainted."

Therefore, before a mentally retarded individual is definitely diagnosed as feeble-minded, it is necessary to learn something of his total mental make-up. This should include, besides a knowledge of his heredity, environment, and educational opportunities, an examination of his grasp of general and school knowledge, his efforts or energy output, and, in fact, an understanding of his whole personality and developmental history, physical as well as mental. Such a knowledge is also important from the standpoint of understanding traits of character that are potentially good or bad for adaptation to the more or less complex situations of life. Moreover, it permits the adoption of suitable training methods to develop the desirable traits and to restrain or overshadow the undesirable ones.

During the past few years earnest efforts have been expended in the study of these traits of character, efforts which have pointed the way to a better understanding of the borderland cases. When this knowledge has become perfected the psychopathic twilight zone will have been traversed and mental hygiene will have come to occupy an enviable position in preventive medicine.

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